

**I YEAR B.Tech. (4YDC)  
Common To All Branches**

2023

**Semester - A**

S. No.	Subject Category	Subject Code	Subject Name	Hours per Week			Credits		Maximum Marks				
				L	T	P	Th	Pr	Theory		Practical		Total
									Th.	CW	SW	Pr.	
1	BSC	MA 10001	Mathematics - I	3	1	0	4	0	70	30	0	0	100
2	BSC	PH10017	Physics	3	-	-	3	-	70	30	-	-	100
3	ESC	EE10015	Fundamentals of Electrical Engineering	2	1	-	3	0	70	30	0	0	100
4	ESC	CE10013	Fundamentals of Civil Engineering & Applied Mechanics	2	1	-	3	0	70	30	0	0	100
5	ESC	ME10049	Engineering Graphics	2	-	-	2	-	70	30	-	-	100
6	BSC (LC)	PH10151	Applied Physics Lab	-	-	2	-	1	-	-	20	30	50
7	ESC (LC)	EE10152	Electrical Engineering Lab	-	-	2	-	1	-	-	20	30	50
8	ESC (LC)	ME10153	Engineering Graphics Lab	-	-	4	-	2	-	-	40	60	100
9	HSMC	HU10191	Extra /Co curricular Activity	-	-	2	-	1	-	-	50	0	50
10	MC		Induction program & Universal Human Values	2-3 weeks in the beginning of I Year & 1 hour per week during semester									
<b>TOTAL</b>				<b>12</b>	<b>3</b>	<b>10</b>	<b>15</b>	<b>5</b>	<b>350</b>	<b>150</b>	<b>130</b>	<b>120</b>	<b>750</b>

**Semester - B**

S. No.	Subject Category	Subject Code	Subject Name	Hours per Week			Credits		Maximum Marks				
				L	T	P	Th	Pr	Theory		Practical		Total
									Th.	CW	SW	Pr.	
1	BSC	MA 10501	Mathematics – II	3	1	-	4	-	70	30	0	0	100
2	BSC	CH10516	Chemistry	3	-	-	3	-	70	30	-	-	100
3	HSMC	HU10551	Technical English	2	-	-	2	-	70	30	0	0	100
4	ESC	CO10507	Programming for Problem Solving	2	1	-	3	-	70	30	0	0	100
5	ESC	EC10508	Basic Electronics Engineering	2	-	-	2	-	70	30	0	0	100
6	BSC (LC)	CH10656	Chemistry Lab	-	-	2	-	1	-	-	20	30	50
7	HSMC (LC)	HU10653	Language Lab	-	-	2	-	1	-	-	20	30	50
8	ESC (LC)	CO10654	Computer Programming Lab	-	-	2	-	1	-	-	20	30	50
9	ESC (LC)	IP10655	Manufacturing Practices	-	-	4	-	2	-	-	40	60	100
10	HSMC	HU10691	Extra /Co curricular Activity	-	-	2	-	1	-	-	50	-	50
11	MC		Induction program & Universal Human Values	2-3 weeks in the beginning of I Year & 1 hour per week during semester									
<b>TOTAL</b>				<b>12</b>	<b>2</b>	<b>12</b>	<b>14</b>	<b>6</b>	<b>350</b>	<b>150</b>	<b>150</b>	<b>150</b>	<b>800</b>

Engineering Certificate shall be awarded after acquiring additional 10 credits out of which 6 credits as 2 Months industrial training within five years

*(Academic)*

**Shri G.S. Institute of Technology & Science**  
**Scheme of Examination 23-24**  
**IV YEAR B.Tech. (BioMedical Engineering)**  
*Applicable to Students Admitted in session 2020*

Semester-VII													
S. No.	Subject Code	Category	Subject Name	Periods /Week			Maximum Marks allotted				Credits		Total
				L	T	P	Theory		Practical		T	P	
							Th.	CW	SW	Pr.			
1	BM- 49004	PCC	Biomechanics	3	1	2	70	30	40	60	3	1	4
2	BM-49003	PCC	Medical Imaging Systems	4	1	-	70	30	-	-	4	-	4
3	BM- 49005	PCC	Biological Control Systems	4	-	2	70	30	40	60	3	1	4
4	BM-	PEC	Elective-III	3	-	2	70	30	40	60	2	1	3
5	BM-49498	PROJECT	Major Project-I(AB Group)	-	-	8	-	-	40	60	-	4	4
6	BM-49998	PROJECT	Major Project-II (BA Group)	-	-	8	-	-	40	60	-	4	4
7	BM-49482	S/I/I	Summer Industrial Training/Internship/Seminar	-	-	4	-	-	40	60	-	2	2
			<b>Total(AB Group)</b>	<b>14</b>	<b>2</b>	<b>18</b>	<b>280</b>	<b>120</b>	<b>200</b>	<b>300</b>	<b>12</b>	<b>9</b>	<b>21</b>
			<b>Total(BA Group)</b>	<b>14</b>	<b>2</b>	<b>18</b>	<b>280</b>	<b>120</b>	<b>200</b>	<b>300</b>	<b>12</b>	<b>9</b>	<b>21</b>

<b>Elective-III</b>	1. BM-xxxxx : Artificial Intelligence and Machine Learning for Medical Applications 2. BM-xxxxx :Power Electronics 3. BM-49261 : Hospital Management and Information Systems 4. BM-49204 : Internet of Things for Medical Applications
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\*PEC --> Can be replaced by NPTEL/Moocs/Swayam Course in consultation with mentor

Semester- VIII													
S. No.	Subject Code	Category	Subject Name	Periods /Week			Maximum Marks allotted				Credits		Total
				L	T	P	Theory		Practical		T	P	
							Th.	CW	SW	Pr.			
1	BM-	PEC	Elective-IV	4	-	-	70	30	-	-	3	-	3
2	BM-	PEC	Elective-V	4	1	-	70	30	-	-	4	-	4
3	BM-49883	S/I/I	Industrial Training/Internship/Seminar	-	-	10	-	-	40	60	-	5	5
4	BM-49998	PROJECT	Major Project-II (AB Group)	-	-	8	-	-	40	60	-	4	4
5	BM-49498	PROJECT	Major Project-I (BA Group)	-	-	8	-	-	40	60	-	4	4
			<b>Total(AB GROUP)</b>	<b>8</b>	<b>1</b>	<b>18</b>	<b>140</b>	<b>60</b>	<b>80</b>	<b>120</b>	<b>7</b>	<b>9</b>	<b>16</b>
			<b>Total(BA GROUP)</b>	<b>8</b>	<b>1</b>	<b>18</b>	<b>140</b>	<b>60</b>	<b>80</b>	<b>120</b>	<b>7</b>	<b>9</b>	<b>16</b>

<b>Elective-IV</b>	1. BM-49612 :Rehabilitation Engineering 2. BM-49611 :Hospital Technology Systems 3. BM-xxxxx : Medical Image Processing 4. BM-xxxxx :Design and manufacturing of medical devices
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<b>Elective-V</b>	1. BM-49701: Biomaterials 2. BM-49702:Telemedicine 3. BM-XXXX: Nanosensors
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**Shri G.S. Institute of Technology & Science**  
**Scheme of Examination 23-24**  
**III YEAR B.Tech. (BioMedical Engineering)**  
*Applicable to Students Admitted in session 2021*

**Semester: V**

S. No.	Subject Code	Category	Subject Name	Periods /Week			Maximum Marks Allotted				Credits		Total Credits
				L	T	P	Theory		Practical		T	P	
							Th.	CW	SW	Pr.			
1	IP-39021	HSMC	Industrial Engineering & Management	4	1	-	70	30	-	-	4	-	4
2	BM-39011	PCC	Signals and Systems	4	1	2	70	30	40	60	4	1	5
3	BM-39013	PCC	Biomedical Instrumentation I	4	1	2	70	30	40	60	4	1	5
4	BM-	PEC	Elective-I	4	-	2	70	30	40	60	3	1	4
5	BM-39481	S/I/I	Seminar/Hospital Training/Internship	-	-	4	-	-	100	-	-	2	2
<b>Total</b>				<b>16</b>	<b>3</b>	<b>10</b>	<b>280</b>	<b>120</b>	<b>220</b>	<b>180</b>	<b>15</b>	<b>5</b>	<b>20</b>

**Elective-I: (1) BM-39254 -Programming Tools & Techniques (2) BM-39251-Embedded Systems**

\*PEC --> Can be replaced by NPTEL/Moocs/Swayam Course in consultation with mentor

**Semester:VI**

S. No.	Subject Code	Category	Subject Name	Periods /Week			Maximum Marks allotted				Credits		Total Credits
				L	T	P	Theory		Practical		T	P	
							Th.	CW	SW	Pr.			
1	EE-39508	PCC	Control Systems	4	1	2	70	30	40	60	4	1	5
2	BM-39501	PCC	Biomedical Signal Processing	4	1	2	70	30	40	60	4	1	5
3	BM-39512	PCC	Biomedical Instrumentation II	4	1	2	70	30	40	60	4	1	5
4		PEC	Elective-II	4	-	-	70	30	-	-	3	-	3
5	BM-39952	PROJEC	Minor Project-I	-	-	8	-	-	40	60	-	4	4
<b>Total</b>				<b>16</b>	<b>3</b>	<b>14</b>	<b>280</b>	<b>120</b>	<b>160</b>	<b>240</b>	<b>15</b>	<b>7</b>	<b>22</b>

**Elective-II : (1) BM-39603-Biomedical Statistical Signal Processing (2) EC-39602 Analog & Digital Communication**

\*PEC --> Can be replaced by NPTEL/Moocs/Swayam Course in consultation with mentor

**Shri G.S. Institute of Technology & Science**  
**Scheme of Examination 23-24**  
**II YEAR B.Tech. (BioMedical Engineering)**  
*Applicable to Students Admitted in session 2022-23*

**Semester - III**

S. No.	Subject Category	Subject Code	Subject Name	Hours per Week			Credits		Maximum Marks				Total Credits	
				L	T	P	Th	Pr	Theory		Practical			Total
									Th.	CW	SW	Pr.		
1	BSC	MA-29024	Mathematics - III	3	1	0	4	-	70	30	0	0	100	4
2	ESC	EE- 29011	Network Analysis	3	-	2	3	1	70	30	40	60	200	4
3	PCC	<b>BM-29001</b>	Analog Electronics	3	-	2	3	1	70	30	40	60	200	4
4	PCC	BM-29007	Bioelectricity & Transducers	3	-	2	3	1	70	30	40	60	200	4
5	PCC	BM-29003	Human Anatomy & Physiology	3	-	2	3	1	70	30	40	60	200	4
6	LC(EI)	EE-29498	Electrical workshop	-	-	2	-	1	-	-	40	60	100	1
7	HSMC	HU-29481	Values, Humanities and Professional	-	2	-	2	-	-	100	-	-	100	2
8	MC	HUM2001	Constitution Of India	2	-	-	-	-	-	50	-	-	50	0
<b>TOTAL</b>				<b>17</b>	<b>3</b>	<b>10</b>	<b>18</b>	<b>5</b>	<b>350</b>	<b>300</b>	<b>200</b>	<b>300</b>	<b>1150</b>	<b>23</b>

**Semester - IV**

S. No.	Subject Category	Subject Code	Subject Name	Hours per Week			Credits		Maximum Marks				Total	
				L	T	P	Th	Pr	Theory		Practical			Total
									Th.	CW	SW	Pr.		
1	BSC	MA-29501	Mathematics IV	3	1	-	4	-	70	30	0	0	100	4
2	ESC	EC-29509	Digital Electronics	3	-	2	3	1	70	30	40	60	200	4
3	PCC	<b>BM-29502</b>	Programming Tools and Techniques	3	-	2	3	1	70	30	40	60	200	4
4	ESC	EI-29572	Fundamentals of Measurement	3	-	2	3	1	70	30	40	60	200	4
5	HSMC	HU-29507	Economics for Engineers	3	-	-	3	-	70	30	0	0	100	3
6	LC	EI-29998	Electronic Workshop	-	-	4	-	2	-	-	40	60	100	2
7	MC	<b>BMM2053</b>	Environmental Science (Audit Only)	2	-	-	-	-	-	50	0	0	50	0
<b>TOTAL</b>				<b>16</b>	<b>1</b>	<b>10</b>	<b>16</b>	<b>5</b>	<b>350</b>	<b>200</b>	<b>160</b>	<b>240</b>	<b>900</b>	<b>21</b>